

**REMARKS**

Claims 1-5, 7-15, 17-25 and 27-31 are all the claims pending in the application.

As a preliminary matter, the undersigned gratefully acknowledges the courtesies extended by the Examiner in the May 15, 2001 personal interview on this matter.

The Examiner rejects claims 1-5, 7-15, 17-25 and 27-31 under 35 U.S.C. §112, first paragraph. Claims 1, 12-14, and 21 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Verhoeckx et al. (hereinafter Verhoeckx) (U.S. Patent No. 4,005,265). Claims 1-5, 12-15, and 21-25, stand rejected under 35 U.S.C. §103(a) as being unpatentable over Tompkins et al. (hereinafter Tompkins) (U.S. Patent No. 4,847,829) in view of Verhoeckx. Claims 7, 17, and 27 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Tompkins and Verhoeckx and further in view of Ramanathan et al. (hereinafter Ramanathan). Claims 8, 18, and 28 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Tompkins, Verhoeckx, and Ramanathan, and further in view of Rangan et al. Claims 9-11, 19-20, and 29-31 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Tompkins, Verhoeckx, and Ramanathan and further in view of Stefik et al.

Applicant respectfully traverses these rejections, and requests reconsideration and allowance of the pending claims in view of the following arguments.

In the rejection under 35 U.S.C. §112, first paragraph, the Examiner asserts that the present specification does not reasonably enable the transmission of "TV quality" video over UTP. Applicant respectfully disagrees.

In particular, as discussed in the May 15, 2001 personal interview with the Examiner and which will now be discussed in detail below, Applicant submits that (1) the present application clearly provides sufficient disclosure to enable one to make and use a teleconferencing system that utilizes, for example, a device to provide TV-quality video over UTP; (2) such a device (e.g., the NVT 518A) was well-known in the art as of the effective filing date of the present application; and (3) this device is not prior art to this application.

**1. The Disclosure of the Present Application is Sufficient to Enable a System Which Transmits TV Quality Video Over UTP Using a Device Such as an A/V Transceiver**

On January 16, 2001, Applicant submitted a Supplemental Response and accompanying Declaration by Dr. Lester F. Ludwig (the first named inventor of the present application) which identified numerous portions of the specification that described how this application teaches not only the concept, but also the implementation of transmission of TV-quality video signals over UTP.

In particular, Applicant demonstrated that the transmission of TV-quality video over UTP is accomplished, *inter alia*, by following Applicant's teachings of a teleconference system having an Audio/Video (A/V) transceiver as described, for example, in FIG. 19 of the application. (*See* Supp. Response, pg. 2, para. 1). Applicant further pointed out several portions of the present application that describe a teleconferencing system that provides video signal transmission utilizing A/V transceivers 840, along with several different examples of UTP wiring formats that may be used in

such a system. (*See* Supp. Response, pg. 3, paras 1-4). Clearly, the present application teaches that a device, such as an A/V transceiver 840, may be used to construct a teleconferencing system.

The Examiner appears to recognize the teachings of the specification by indicating that the present application discloses an “overview of the signal routing mechanism used in [a] video conferencing arrangement.” (*See* Office Action, pg. 2). Moreover, during the interview, the Examiner even acknowledged some of the similarities between Applicant’s disclosed A/V transceivers 840 and one of the A/V transceivers (i.e., NVT Model 518A Video Transceiver) that was publicly available as of the effective filing date of the present application. In particular, the Examiner acknowledged that several features of Applicant’s A/V transceivers 840, such as the A/V ports, wiring formats, and performance features (e.g., TV-quality video signal transmission over UTP), appeared to be similar to what was described in the NVT 518A specification sheet.

Accordingly, the present application clearly provides sufficient description to enable one of ordinary skill to construct a teleconferencing system that utilizes an A/V transceiver, such as the NVT 518A.

**2. The A/V Transceiver in Question (as Embodied, for Example, in the NVT 518A) Was Well-known in the Art as of the Effective Filing Date of the Present Application**

Applicant also discussed in the personal interview that prior to the effective filing date of the present application (October 1, 1993), Network Video Technologies, Inc. (NVT) made an A/V transceiver, the NVT Model 518A Video Transceiver (hereinafter “NVT 518A”), publicly available. (*See* Ludwig Decl., para. 11). The NVT 518A transceiver was billed (per the

advertisement attached to Dr. Ludwig's Declaration) as transmitting TV-quality video over UTP.

*Id.*

Looking at the NVT 518A specification sheet in more detail reveals that this video transceiver is a device that allows transmission of full motion color video over standard telephone wire, and can be used in applications, including video conferencing and multi-media. The NVT 518A specification sheet further describes connector interfaces for audio/video along with a wiring configuration for a network interface.

While some of the circuitry details of the A/V Transceivers 840 are not detailed in the present application, Applicant respectfully points out that such details were not necessary because an appropriate A/V transceiver (e.g., NVT 518A) was well known in the video conferencing art as of the effective filing date of the present application (described above). “[T]he specification need not disclose what is well-known to those skilled in the art and preferably omits that which is well-known to those skilled and already available to the public.” See M.P.E.P. § 2164.05(a) (citing *In re Buchner*, 929 F.2d 660, 661, 18 U.S.P.Q.2d 1331,1332 (Fed. Cir. 1991)) (emphasis added). In accordance with the M.P.E.P., the present application need not include details of A/V transceiver design since an appropriate A/V transceiver (e.g., NVT 518A) was well-known and available to the public as of the filing date of the present application.

**3. The NVT 518A is Not Prior Art to The Present Application**

Now, although the Model 518A Video Transceiver was available to the public prior to the effective filing date of the present application, it is not prior art to the present application. This issue was discussed in the personal interview with the Examiner, and was described in detail in the January 16, 2001 Supplemental Response.

During the interview, Applicant related to the Examiner that prior to the effective filing date of the present application (October 1, 1993), Lester Ludwig and J. Chris Lauwers conceived a system that included the transmission of TV-quality video signals over UTP. Ludwig Decl., para. 3. One aspect of the conceived system included a recognition that one could use a common mode filter, such as the one disclosed in USP 4,800,344 ("the '344 Patent"), issued January 24, 1989 to Graham, to improve line transmission quality so as to enable the kind of bandwidth over UTP that is necessary to transmit TV-quality video signals. *Id.* Dr. Ludwig later disclosed to Graham that the teachings of the '344 Patent could be used as part of a design to enable the transmission of TV-quality video signals over UTP. Ludwig Decl., para. 4.

After this conception, but before October 1, 1993, Dr. Ludwig learned that video applications of the '344 Patent had been licensed to Mr. Dan Nitzan, who had started Network Video Technologies, Inc. Ludwig Decl., paras. 4, 5. After Dr. Ludwig had his discussions with Mr. Nitzan and Graham, but prior to the effective filing date of the present application (October 1, 1993), NVT produced an A/V transceiver (NVT Model 518A Video Transceiver). Ludwig Decl., paras. 4, 11.

According to Dr. Ludwig, Mr. Nitzan was one of ordinary skill in the art who was able to use his knowledge, combined with what Dr. Ludwig disclosed to him, to construct the Model 518A Video Transceiver. Ludwig Decl., para. 14.

While the Model 518A Video Transceiver was made available to the public prior to the effective filing date of the present application, it is not prior art to the present application since, as Dr. Ludwig states, the NVT 518A is constructed from a design conceived by Dr. Ludwig. Ludwig Decl., paras. 3, 5, 11, 14. Accordingly, an A/V transceiver that was capable of providing TV-quality video over UTP (e.g., NVT 518A) was well-known in the videoconferencing art at least as early as the effective filing date of the present application (October 1, 1993), but is not prior art as to this application.

In summary, Applicant has demonstrated that the present application clearly provides sufficient disclosure to enable one of ordinary skill to make and use a teleconferencing system that utilizes a device, such as an A/V transceiver 840, to provide TV-quality video over UTP. Applicant has also shown that one type of A/V transceiver which was capable of providing TV-quality video over UTP (e.g., NVT 518A) was well-known in the videoconferencing art at least as early as the effective filing date of the present application, but is not prior art as to this application.

Applicant therefore asserts that not only does the present application teach the concept and implementation of transmitting TV-quality video signals over UTP (as discussed in the January 16, 2001 Supplemental Response), but the specification enables one of ordinary skill to utilize a publicly available A/V transceiver (e.g., NVT 518A) to make and use Applicant's teleconferencing system. Based on the foregoing, the present application clearly enables one of ordinary skill to

construct a teleconferencing system that provides TV-quality video signal transmission over UTP. As such, Applicant respectfully requests the Examiner to withdraw the rejection of claims 1-5, 7-15, 17-25 and 27-31 under 35 U.S.C. § 112, first paragraph.

Turning now to the prior art rejection, the Examiner has rejected claims 1, 12-14, and 21 under 35 U.S.C. §103(a) as being unpatentable over Verhoeckx. Specifically, the Examiner stated that Verhoeckx, at col. 3, line 9; col. 7, line 32, teaches color video images that are reproduced at TV quality.

During the May 15, 2001 personal interview, Applicant discussed how the Verhoeckx reference does not teach "TV-quality video." During that interview, the Examiner appeared to recognize Verhoeckx's deficiencies by agreeing that this reference does not teach TV quality video signal transmission (*See* May 15, 2001 Interview Summary). The Examiner also stated in the interview that should the Applicant overcome the enablement rejection regarding the "TV-quality" feature, then the rejections based on the Verhoeckx reference would be withdrawn since Verhoeckx does not teach Applicant's "TV-quality" feature.

Applicant maintains the position, as described in detail in the November 11, 2000 Amendment, that even if Verhoeckx does transmit a video signal, it clearly does not teach the transmission of a color video signal at TV-quality. Moreover, Verhoeckx cannot possibly teach or suggest the transmission of color video at TV-quality, since that would require the transmission of a 3.5 MHz signal over a UTP transmission system known in the art at the time of the invention as having only 1 MHz bandwidth (i.e., UTP), which is not possible. (*See* November 11, 2000 Amendment, pg. 5, paras. 1, 2)

Because Applicant has demonstrated the enabling nature of the present application (described above), and in view of the Examiner's acknowledgements made during the interview, Applicant asserts that Verhoeckx does not teach or suggest the "TV-quality" feature as recited in independent claims 1, 12, and 21. Thus, these independent claims, and their dependencies, are patentable.

The Examiner next rejects claims 1-5, 12-15, and 21-25 under 35 U.S.C. §103(a) as being unpatentable over Tompkins in view of Verhoeckx.

During the May 15, 2001 personal interview, Applicant further discussed the improper combination of the Tompkins and Verhoeckx references. In the interview, Applicant reiterated the arguments presented in the November 11, 2000 Amendment. More specifically, Applicant discussed with the Examiner that should one of ordinary skill in the art have combined the Tompkins video conferencing system (e.g., 70 MHz and 170 MHz video transmission on coaxial cable), with the UTP wiring of Verhoeckx, the resulting system would have comprised a system that would attempt to transmit signals, at around 70 MHz and 170 MHz, on a 1 MHz (UTP) wire. (*See* November 11, 2000, pg. 6, para. 4- pg. 7, para. 1). Clearly, this is not possible and therefore such a combination would render Tompkins inoperable. Thus, it cannot possibly have been obvious to adopt the Examiner's proposed modification of Tompkins using UTP as disclosed by Verhoeckx.

Applicant further discussed with the Examiner that not only does Tompkins not suggest the use of UTP in its system; Tompkins actually teaches away from using UTP. Applicant specifically discussed how Tompkins teaches away from using existing telephone wires (UTP) by specifically noting the disadvantages of UTP and utilizing coaxial cable in light of these disadvantages.



Applicant further pointed out to the Examiner that the Tompkins file history describes how UTP wiring is incapable of meeting the requirements of their system, and how the Tompkins system requires coaxial cable.

Applicant notes that the Examiner did not render an opinion during the interview regarding the lack of suggestion to combine Tompkins with Verhoeckx (*See Interview Summary*). Furthermore, the Examiner has not answered Applicant's "lack of suggestion" argument which has been presented in great detail in responses that were filed on May 12, 1999, and November 17, 2000 (*See May 12, 1999 Amendment, pgs. 14-17; November 17, 2000 Amendment, pgs. 6-8*). The M.P.E.P. requires that "where an Applicant traverses any rejection, the Examiner should ... take note of the Applicant's argument and answer the substance of it." M.P.E.P. § 707.07(f). Accordingly, Applicant respectfully requests that if the Examiner disagrees with Applicant's position that there is a lack of suggestion to combine the Tompkins and Verhoeckx references, and that their combination is improper, he respond substantively to Applicant's arguments.

Accordingly, Tompkins, whether combined with or modified by Verhoeckx, does not teach or render obvious Applicant's invention, as recited in independent claims 1, 12 and 21. Thus, these independent claims, and their dependencies, are patentable.

Neither Ramanathan, nor Rangan, nor Stefik remedies any of the identified deficiencies of Tompkins or Verhoeckx. Therefore, pursuant to the foregoing discussion, Applicant submits that claims 1-5, 7-15, 17-25, and 27-31 are patentable.

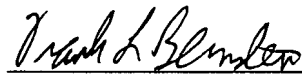
The Examiner's rejections having been overcome, Applicant submits that the subject application is in condition for allowance. The Examiner is respectfully requested to contact the

**AMENDMENT UNDER 37 C.F.R. §1.111**  
**U.S. Application No. 09/072,549**

**PATENT APPLICATION**

undersigned at the telephone number listed below to discuss other changes deemed necessary. Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this case, and any required fee for such extension is to be charged to Deposit Account No. 19-4880.

Respectfully submitted,



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**23493**

PATENT TRADEMARK OFFICE

Date: July 10, 2001

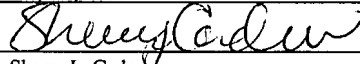
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Sherry L. Cadruvi

**APPENDIX**

**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE ABSTRACT OF THE DISCLOSURE:**

**The abstract is changed as follows:**

A multimedia collaboration system [that] integrates separate real-time and asynchronous network[s] paths--the former for real-time audio and video, and the latter for control signals and textual, graphical and other data--in a manner that is interoperable across different computer and network operating system platforms and which facilitates close[ly] approximations [approximates the experience] of face-to-face collaboration, while liberating the participants from the limitations of time and distance.

In one embodiment, the system and method include at least one analog video-signal source, a plurality of video display devices, and at least one communication control component configured to produce digital control-signals. This system and method further provide for a computer network having an unshielded twisted pair (UTP) defining a UTP communication path arranged for video-signal transportation and configured to multiplex analog video-signals originating at one of the video-signal sources, with digital control-signals from one of the communication control components. The system and method further provide for the transmission of multiplexed signals along the UTP communication path to at least one of the video display devices, and use the control-signals to control reproduction of TV quality color

video images on at least one of the video display devices, based on the video-signals. [These capabilities are achieved by exploiting a variety of hardware, software and networking technologies in a manner that preserves the quality and integrity of audio/video/data and other multimedia information, even after wide area transmission, and at a significantly reduced networking cost as compared to what would be required by presently known approaches. The system architecture is readily scalable to the largest enterprise network environments. It accommodates differing levels of collaborative capabilities available to individual users and permits high-quality audio and video capabilities to be readily superimposed onto existing personal computers and workstations and their interconnecting LANs and WANs. In a particular preferred embodiment, a plurality of geographically dispersed multimedia LANs are interconnected by a WAN. The demands made on the WAN are significantly reduced by employing multi-hopping techniques, including dynamically avoiding the unnecessary decompression of data at intermediate hops, and exploiting video mosaicing, cut-and-paste and audio mixing technologies so that significantly fewer wide area transmission paths are required while maintaining the high quality of the transmitted audio/video.]